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09/222,340	12/28/1998	WILLIAM F. TERRELL	82771.P279	3304

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EXAMINER

VAUGHN JR, WILLIAM C

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 05/09/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/222,340

Applicant(s)

TERRELL ET AL.

Examiner

William C. Vaughn, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 16-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

WCV

DETAILED ACTION

1. This Action is in response to the Amendment and Response received 26 February 2003.
2. Amendment C, Paper 12, received 26 February 2003 has been entered into record.

Response to Arguments

3. Applicant's arguments and amendments filed on 03 December 2002 have been carefully considered but they are not deemed fully persuasive. Applicant's arguments are deemed moot in view of the following new grounds of rejection as explained here below, necessitated by Applicant's substantial amendment to the claims (i.e., *filters including at least one filter being triggered to denote when a received packet satisfies filter criteria associated with the at least one filter*) which significantly affected the scope thereof.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1-14, 17, 18 and 20-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramaswamy et al. (Ramaswamy), U.S. Patent No. 6,510,164 in view of Barzilai et al. (Barzilai), "Design and Implementation of an RSVP-Based Quality of Service Architecture for an Integrated Services Internet", 1998.
6. Regarding **claim 1**, Ramaswamy discloses the invention substantially as claimed. Ramaswamy discloses *an apparatus (10) adapted to facilitate communications between a client*

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device (7₁-7₂ and 9₁-9₂) and a remote device (5₁, 5₂, and 5₃), comprising a network interface including (i) filters including at least one filter being triggered to denote when a received packet satisfies filter criteria associated with the at least one filter [see Ramaswamy, Col. 8, lines 48-65]. However, Ramaswamy does not explicitly disclose a (ii) a classifier, communicatively coupled to the filters, to classify and mark one of the service levels associated with the received data packet in response to satisfying filter criteria associated with the at least one filter and a controller coupled to the network interface, to dynamically create and remove the filters controlling access to the different service levels based, at least in part, on an admissions profile.

7. In the same field of endeavor, Barzilai discloses (e.g., a system for traffic policing, traffic shaping and buffer management for QOS support). Barzilai discloses *(ii) a classifier, communicatively coupled to the filters, to classify and mark one of the service levels associated with the received data packet in response to satisfying filter criteria associated with the at least one filter* (Barzilai teaches that as data packets traverses through the protocol stack, the session handle carried in the buffer header is used as the classifier for session-specific handling of the packet through the use of the QOS manager), [see Barzilai, page 398, 1st column, 1st-3rd paragraph and page 411, 2nd column, 1st paragraph- 3rd paragraph]; *and a controller coupled to the network interface, to dynamically create and remove the filters controlling access to the different service levels based, at least in part, on an admissions profile* (Barzilai teaches the QOS manager functions a control plane component primarily responsible for the creation, modification, and removal of reservation filters associated with different flows as well as admission control), [see Barzilai, page 400, 2nd column, 4th paragraph].

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8. Accordingly, it would have been obvious to one of ordinary skill in the networking art at the time the invention was made to have incorporated Barzilai teaches of a system for traffic policing, traffic shaping and buffer management for QOS support with the teachings of Ramaswamy, for the purpose of providing a system that supports integrated services on the Internet, network routers as well as end hosts in order to further enhance classification of traffic and to handle data packets from different flows as well as having a system that fully supports TCP/IP stack [see Barzilai, page 397, column 2]. By this rationale **claim 1** is rejected.

9. Regarding **claim 2**, Ramaswamy-Barzilai further discloses *wherein the at least one filter, when triggered, initiate an admission control decision preventing allocation of service level resources which are not yet required or authorized* [see Barzilai, page 410, 2nd paragraph]. By this rationale **claim 2** is rejected.

10. Regarding **claim 3**, Ramaswamy-Barzilai further discloses *wherein each filter is triggered by information contained within received the data packet* (Barzilai teaches that the address is used during data transfer to efficiently identify the reservation structure to use for policing and shaping traffic on a particular data socket), [see Barzilai, Page 404, 1st Col., 2nd paragraph]. By this rationale **claim 3** is rejected.

11. Regarding **claim 4**, Ramaswamy-Barzilai further discloses *wherein each filter is triggered by one or both of packet source information and packet destination information* [see rejection of claim 3, supra]. By this rationale **claim 4** is rejected.

12. Regarding **claim 5**, Barzilai further discloses wherein the admission profile is stored in a communicatively coupled remote device [see rejection of claim 1, supra]. By this rationale **claim 5** is rejected.

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13. Regarding **claim 6**, Ramaswamy-Barzilai further discloses *wherein the communicatively coupled remote device is a bandwidth broker or other generic policy server* [see Barzilai, page 397, 2nd column, 2nd paragraph and page 398, 1st column, 2nd paragraph]. By this rationale **claim 6** is rejected.

14. Regarding **claim 7**, Ramaswamy-Barzilai further discloses *wherein the admission profile is available locally within the apparatus* [see rejection of claim 5, supra]. By this rationale **claim 7** is rejected.

15. Regarding **claim 8**, Ramaswamy-Barzilai further discloses *wherein the controller establishes an ingress profile in response to detecting an associated trigger event, wherein the ingress profile modifies the received data packet adhering to the filter criteria to denote a particular service level, in accordance with the admissions profile* [see rejection of claim 1, supra]. By this rationale **claim 8** is rejected.

16. Regarding **claim 9**, Ramaswamy-Barzilai further discloses *wherein the controller removes ingress profiles when data packets adhering to the filter criteria are no longer received, liberating apparatus resources* [see Barzilai, page 406, 2nd column, 4th paragraph]. By this rationale **claim 9** is rejected.

17. Regarding **claim 10**, Ramaswamy-Barzilai further discloses *wherein the controller removes ingress profiles after a predetermined period of time, liberating apparatus resources* [Barzilai, page 410, 1st column, 1st paragraph-3rd paragraph]. By this rationale **claim 10** is rejected.

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18. Regarding **claim 11**, Ramaswamy-Barzilai further discloses *wherein the controller removes at least one of the filters in accordance with a network administration policy* [see Barzilai, page 410, 1st column, paragraph 1, Figure 9]. By this rationale **claim 11** is rejected.

19. Regarding **claim 12**, Ramaswamy-Barzilai further discloses *wherein the controller removes at least one of the filters based, at least in part, on time-of-day* [see rejection of claim 11, *supra*]. By this rationale **claim 12** is rejected.

20. Regarding **claim 13**, Ramaswamy-Barzilai further discloses *a method for controlling provisions of differentiated services in a data network* [see Barzilai, abstract], *the method comprising (a) installing a filter on a network edge device to provide a trigger notification upon detecting data packets adhering to filter criteria*, [see rejection of **claim 1**, *supra*] *(b) determining whether a received data packet satisfies the filter criteria* [see rejection of claim 1, *supra*]; *and (c) issuing a command by a bandwidth broker to a controller of the network edge device to dynamically install or remove a filter in response to determining whether the received data packets satisfies the filter criteria* [see rejection of claim 1, *supra*]. By this rationale **claim 13** is rejected.

21. Regarding **claim 14**, Barzilai further discloses *(d) marking the received data packets adhering to the filter criteria according to a subscribed service level (Barzilai teaches that the QOS manager tags the data path with a session handle to enable handling of data packets commensurate with their service requirements)*, [see Barzilai, page 398, 1st column, 1st paragraph]. By this rationale **claim 14** is rejected.

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22. Regarding **claim 17**, Barzilai further *discloses (e) identifying and marking the received data packets with routing information in accordance with the subscribed service level* [see rejection of claim 14, supra]. By this rationale **claim 17** is rejected.

23. Regarding **claim 18**, Barzilai further discloses *(f) placing the data packets in a proper format for transmission* (Barzilai teaches TCP formats packets into a acceptable form for transmission to the network), [see Barzilai, page 407, 2nd column, 2nd paragraph]. By this rationale **claim 18** is rejected.

24. Regarding **claim 20**, Barzilai further discloses *wherein the controller further dynamically controls access to at least one classifier profile in accordance with the admission profile* [see rejection of claim 1, supra]. By this rationale **claim 20** is rejected.

25. Regarding **claim 21**, Barzilai further discloses *an apparatus adapted to facilitate communications between a client device and a remote device* [see rejection of claim 1, supra], *comprising: filter means for controlling access to different service levels* [see rejection of claim 1, supra]; *means for classifying and marking one of the service levels associated with the received data packet in response to satisfying filter criteria associates with the filter means* [see rejection of claim 1, supra]; *and control means for dynamically creating and removing a portion of the filter means based at least in part on an admission profile* [see rejection of claim 1, supra]. By this rationale **claim 21** is rejected.

26. Regarding **claim 22**, Barzilai further discloses *wherein the admissions profile is stored in a communicatively coupled remote device* [see rejection of claim 5, supra]. By this rationale **claim 22** is rejected.

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27. Regarding **claim 23**, Barzilai further discloses *wherein the communicatively coupled remote device is a bandwidth broker or other generic policy server* [see rejection of claim 6, supra]. By this rationale **claim 23** is rejected.

28. Regarding **claim 24**, Barzilai further discloses *wherein the filter means comprises a plurality of filters* [see rejection of claim 1, supra]. By this rationale **claim 24** is rejected.

29. Regarding **claim 25**, Barzilai further discloses *wherein the control means removes at least one of the filters in accordance with a network administration policy* [see rejection of claim 11, supra]. By this rationale **claim 25** is rejected.

30. Regarding **claim 26**, Barzilai further discloses *wherein the control means removes at least one of the filters based, at least in part, on time-of-day* [see rejection of claim 12, supra]. By this rationale **claim 26** is rejected.

Claim Rejections - 35 USC § 103

31. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

32. **Claims 16 and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramaswamy-Barzilai as applied to claim 1-14, 17, 18 and 20-26 above, and further in view of in view of what was well known to the ordinary artisan in the networking art at the time the invention was made.

33. Regarding **claim 16**, Ramaswamy-Barzilai discloses the invention substantially as claimed. Barzilai further discloses *wherein the marking of the received data packet includes*

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setting a logic value of a bit in a Type of Service (ToS) field of a header of the data packet (The Examiner takes Official Notice that it was well known and widely implemented in the networking art at the time the invention was made for the markings of a data packet to include logic value of a bit in a ToS field of a data packet, since it is a known standard for an IP packet header to include that particular field and thus since Barzilai does state that the environment in which the invention can be used is TCP/IP. By this rationale **claim 16** is rejected.

34. Regarding **claim 19**, Ramaswamy-Barzilai further discloses *wherein the classifier marks a Type of Service (ToS) field of the received data packet to denote a level of service for transmission of the data packet* [see rejection of claim 16, supra]. By this rationale **claim 19** is rejected.

Claim Rejections - 35 USC § 102

35. **Claims 1-14 and 16-26** are rejected under 35 U.S.C. 102(e) as being anticipated by Wittig et al., (Wittig), "Network Layer Scaling: Congestion Control in Multimedia Communication with Heterogeneous Networks and Receivers", Copyright 1994.

36. Regarding **independent claims 1, 13, and 21**, (e.g., exemplary independent claim 1), Witting discloses *an apparatus adapted to facilitate communications between a client device and a remote device* [see Wittig, Figure 3, sender, router, and target], *comprising a network interface including (i) filters to control access to different service levels and (ii) a classifier, communicatively coupled to the filters, to classify and mark one of the service levels associated with a received data packet in response to satisfying filter criteria associated with at least one filter* [see Wittig, page 275 and page 283, section 5]; *and a controller coupled to the network interface, to dynamically create and remove the filters controlling access to the different service*

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levels based, at least in part, on an admissions profile (Witting teaches that filters can be changed in the stream setup phase as well as dynamically at run time), [see Witting, page 280, 4th paragraph]. By this rationale **claim 1** is rejected.

37. With regards to dependent claims 2-12, 14 and 16-20, 22-26, the limitations of these claims are taught within the figures of Witting.

Cited Prior Art

38. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Schneider et al. (Schneider), U.S. Patent No. 6,408,336 discloses policy server having multiple access filters associated with different trust levels [see Schneider, Abstract, Figures 1-3, 13-25].

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Vaughn, Jr. whose telephone number is (703) 306-9129. The examiner can normally be reached on 8:00-5:00, 1st Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Powell can be reached on (703) 305-9703. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9700.

WCV

WCV
Patent Examiner
Art Unit 2142
April 30, 2003


MARK R. POWELL
SUPERVISORY PATENT EXAMINER
GROUP 2400